EPA Environmental Technology Verification Program

Quarterly Report

July 2000

Mobile Source Emission Control Technologies to Be Verified by ETV

The ETV Program's Air Pollution Control Technology Pilot is beginning efforts to verify technologies that are designed to control emissions of particulate matter and nitrogen oxides from mobile sources, such as diesel engines. The need for verification in this area was identified during discussions between EPA's ETV Program, EPA's Office of Transportation and Air Quality (OTAQ, formerly the Office of Mobile Sources), and the Northeastern States for Coordinated Air Use Management (NESCAUM). Types of technologies that may be verified under this pilot are tailpipe controls and oxidation catalysts, engine modifications and rebuild kits, fuel additives, lubricants and lubricant additives, and fuel-borne catalysts. Technology performance, including emission reduction benefits, will be verified.

To address the mobile source emission control technology category, the Air Pollution Control Technology Pilot is developing a Technical Panel of 15 to 25 experts, including manufacturers, regulators, and testing groups, who will assist in (1) developing generic protocols and test/QA plans and (2) developing a list of priority technologies for verification. The Technical Panel will meet for the first time in mid-September. The pilot will also be adding three new members from the mobile source community to its Stakeholder Advisory Committee. A draft generic verification protocol for the mobile source emission control technology category is expected to be completed in late September. A test/QA plan for the highest priority mobile source emission control technology will be completed by November. The first verification test will begin in early December.

Total number of ETV Verifications up to 79!

Five ETV pilots recently verified 13 new technologies, increasing the total number of ETV verified technologies to 79!

The P2 Innovative Coatings and Coating Equipment Pilot verified the performance of a laser targeting technology. This technology, called the Laser Touch model LT-B512, is designed to lower emissions during coating operations through improved transfer efficiency while maintaining or improving the finish quality of the applied coating. This product was developed by:

- ✔ Laser Touch and Technologies, LLC; Waterloo, IA

The Drinking Water Systems Pilot verified the performance of a drinking water ultrafiltration (UF) system. The Model A35 Ultrafiltration System, like other UF processes, removes microbial contaminants, such as *Giardia* and *Cryptosporidium*, and other particulate contaminants from drinking water. The verified UF system was developed by:

- ✔ Aquasource North America; Richmond, VA

The Greenhouse Gas Technology Pilot verified the performance of two technologies. The Pin-Tech device is designed to reduce overall emissions of tank product vapors by maintaining "no detectable emissions" (<500 ppmv) in the non-venting mode. The Pin-Tech Bubble Tight <500 ppm Relief Vent was developed by:

- ✔ The Protectoseal Company; Bensenville, IL

Continued on page 2

What's Inside

Pilot Points

Water

Drinking Water Systems

- Issued a verification of Aquasource N.A.'s Model A-35 Ultrafiltration System in June.

Source Water Protection Technologies

- Held a vendor meeting for manufacturers of coatings and grouts for sewer system rehabilitation on June 27.
- Held a vendor meeting for manufacturers of animal waste treatment technologies on June 28 and 29.

Pollution Prevention, Recycling and Waste Treatment Systems

P2 Innovative Coatings and Coating Equipment

- Issued a verification of Laser Touch and Technologies, LLC's laser targeting device in May.

P2 Metal Finishing Technologies

- Posted a Request for Innovative Pollution Prevention Metal Finishing Technologies on May 12; responses were due June 9.
- Held a stakeholder group meeting in Chicago, IL on June 29.

Environmental Technology Evaluation Center (EvTEC)

- Developed an MOU with the gas industry's Industrial Technology Commercialization Center to support verification of gas technologies.
- Held a technology panel meeting for innovative cement technologies.
- Signed up two new vendors: AWTS, Inc. and In-Pipe Technology, LLC.
- Completed three technology evaluation plans: the Thermo-Energy STORS Technology Evaluation Plan; the Soil Stabilizer Evaluation Plan; and the De-nitrification Evaluation Plan.

Monitoring

Advanced Monitoring Systems

- Issued verifications of 2 on-line turbidimeters in July.
- Finalized the ambient fine particle monitors test plan in June.
- Began testing optical open path monitors.
- Began testing the second round of NO/NO2 analyzers.

Site Characterization & Monitoring Technologies

- Issued 7 new verifications in 3 technology categories.
- Identified direct push well technologies as a new area for verification.
- Began the second round of verifications for explosives detection technologies.

Air

Air Pollution Control Technologies

- Completed testing 8 baghouse filtration products; 2 additional products are currently being tested.

Greenhouse Gas Technologies

- Issued a verification of The Protectoseal Company's Pin-Tech Bubble Tight <500 ppm Relief Vent in May.
- Issued a verification of ANR Pipeline Company's Parametric Emissions Monitoring System in June.
- Published an article about the pilot in the March-April edition of the UN Tech Monitor journal.

Continued from page 1

The verified Parametric Emissions Monitoring (PEM) System is designed to provide an alternative to instrumental continuous emissions monitoring systems and is potentially more cost-effective. This system was developed by:

✔ ANR Pipeline Company; Detroit, MI

The Site Characterization and Monitoring Technologies Pilot verified seven technologies in three categories: decision support system (DSS) technologies; explosives detection technologies; and ground water sampling technologies. DSS technologies are designed to help environmental professionals quickly and comprehensively characterize and manage information relevant to understanding environmental contamination problems. The DSS verified technologies were developed by:

✔ C Tech Development Corporation; Huntington Beach, CA
✔ DecisionFX, Inc.; Bosque Farms, NM (2 technologies)
✔ University of Tennessee; Oak Ridge, TN

Explosives detection technologies are designed to detect and measure explosives in soil and water. The verified explosives detection technologies were developed by:

✔ Barringer Instruments, Inc.; Warren, NJ
✔ Research International, Inc.; Woodinville, WA

The ground water sampling technology, called the KABIS Sampler, is designed to eliminate turbidity, organic constituent volatilization, and costly well purging. This technology was developed by:

✔ SIBAK Industries; Solano Beach, CA

The Advanced Monitoring Systems Pilot verified the performance of two on-line turbidimeters. Turbidimeters are used to measure the "turbidity," or "cloudiness," of water caused by suspended particles, by measuring the level of light scattering in a water stream. Turbidity in drinking water can be a sign of potentially harmful problems. The on-line turbidimeters were developed by:

✔ Monitek Technologies, Inc.; Hayward, CA
✔ Peak Process Controls, Inc.; Schomberg, Ontario

The new verification reports and statements are available on the ETV Program web site at http://www.epa.gov/etv/library.htm.

79 ETV Verified Technologies

Compressor Leak Mitigation for Natural Gas
- ✔ A&A Environmental Seals, Inc.; La Marque, TX
- ✔ C. Lee Cook; Louisville, KY
- ✔ France Compressor Products; Newton, PA

Cone Penetrometers
- ✔ Fugro Geosciences, Inc.; Houston, TX
- ✔ U.S. Navy, Naval Command, Control, and Ocean Surveillance Center, Research, Development, Test and Evaluation Division; San Diego, CA

Decision Support Systems
- ✔ C Tech Development Corporation; Huntington Beach, CA
- ✔ DecisionFX, Inc.; Bosque Farms, NM (2 technologies)
- ✔ Environmental Software; Huntington Beach, CA
- ✔ ESRI; Vienna, VA
- ✔ University of Tennessee; Oak Ridge, TN

Drinking Water Microfiltration Systems
- ✔ Aquasource North America; Richmond, VA
- ✔ Pall Corporation; East Hills, NY

Drinking Water UV Radiation/Disinfection Systems
- ✔ Calgon Carbon Corporation; Markham, Ontario

Emulsified Fuels
- ✔ A-55 Clean Fuels, Inc.; Reno, NV

Explosives Detection Devices
- ✔ Barringer Instruments, Inc.; Warren, NJ
- ✔ Research International, Inc.; Woodinville, WA

Field Portable GC/MSs
- ✔ Bruker Analytical Systems; Billerica, MA
- ✔ Bruker Daltonics, Inc. (formerly Viking Instruments); Billerica, MA

Field Portable X-ray Fluorescence Analyzers
- ✔ EDAX International (formerly through Scitec, Inc.); Mahwah, NJ
- ✔ HNU Systems, Inc.; Newton Highlands, MA
- ✔ Metorex, Inc.; Princeton, NJ (2 technologies)
- ✔ Niton Corporation; Bedford, MA
- ✔ Spectrace Instrutments (formerly TN Spectrace); Sunnyvale, CA (2 technologies)

General P2 Technologies
- ✔ Rayovac Corporation; Madison, WI
- ✔ Smart Sonic; Newbury Park, CA

Ground Water Sampling Devices
- ✔ SIBAK Industries; Solano Beach, CA

High-Volume Low-Pressure Paint Spray Guns
- ✔ ITW DeVilbiss; Maumee, OH (3 technologies)
- ✔ Sharpe Manufacturing Co.; Santa Fe Springs, CA

Landfill Methane Control Technologies
- ✔ International Fuel Cells Corporation; South Windsor, CT

Laser Targeting Devices
- ✔ Laser Touch and Technologies, LLC; Waterloo, IA

NO/NO2 Analyzers
- ✔ ECOM America Ltd.; Duluth, GA
- ✔ Energy Efficiency Systems, Inc.; Westboro, MA
- ✔ Horiba Instruments; Pittsburgh, PA
- ✔ Testo, Inc.; Flanders, NJ
- ✔ TSI, Inc.; Shoreview, MN

On-line Turbidimeters
- ✔ Monitek Technologies, Inc.; Hayward, CA
- ✔ Peak Process Controls, Inc.; Schomberg, Ontario

Paint Overspray Arrestors
- ✔ AAF International; Louisville, KY (2 technologies)
- ✔ ATI; Ottawa, KS (2 technologies)
- ✔ Columbus Industries; Asheville, OH (2 technologies)
- ✔ Koch Filter Corporation; Louisville, KY (2 technologies)
- ✔ Purolator Products Air Filtration Co.; Henderson, NC (2 technologies)
- ✔ Farr Company; El Segundo, CA

Parametric Emissions Monitoring Systems
- ✔ ANR Pipeline Company; Detroit, MI

PCB Analyzers
- ✔ Dexsil Corporation; Hamden, CT
- ✔ Electronic Sensor Technology; Newbury Park, CA
- ✔ Envirologix, Inc.; Portland, ME
- ✔ Hach Company; Loveland, CO
- ✔ Strategic Diagnostics, Inc.; Newark, DE (3 technologies)

Pressure Release Valves
- ✔ The Protectoseal Company; Bensenville, IL

Recycling Technologies
- ✔ Katec, Inc.; Virginia Beach, VA

Sediment Sampling Technologies
- ✔ ARI; Lemhi, ID
- ✔ Art's Manufacturing and Supply; Sauk City, WI

Soil/Soil Gas Sampling Devices
- ✔ Art's Manufacturing and Supply; American Falls, ID
- ✔ Clements & Associates, Inc.; Newton, IA
- ✔ Geoprobe Systems, Inc.; Salina, KS
- ✔ Quadrel Services, Inc.; Clarksburg, MD
- ✔ SimulProbe; Novato, CA
- ✔ W.L. Gore & Associates, Inc.; Elkton, MD

Wellhead Monitoring Devices
- ✔ Electronic Sensor Technology; Newbury Park, CA
- ✔ Inficon, Inc.; East Syracuse, NY
- ✔ Innova AirTech Instruments; Denmark
- ✔ Perkin-Elmer Corporation; Wilton, CT
- ✔ Sentex Systems, Inc.; Ridgefield, NJ

Wastewater Treatment Systems - EvTEC
- ✔ ThermoEnergy Corporation; Little Rock, AR

Indoor Air - Commercial Furniture
- ✔ Test Protocol Verification

Indoor Air - Ventilation Air Filters
- ✔ Test Protocol Verification

ETV Events

Date	Location	Event
Aug. 9	Crystal City, VA	Site Characterization and Monitoring Technologies - Stakeholder Group Meeting
Aug. 14-17	Washington, DC	ETV Program - ETV booth exhibit at the International Symposium and Innovative Technology Tradeshow 2000
Sept. 10-14	Louisville, KY	ETV Program - ETV booth exhibit at the International Public Works Congress & Exposition
Sept. 12-14	Ontario, CA	ETV Program - ETV booth exhibit at the Environmental Management & Technology Exposition
Sept. 19-20	Boston, MA	ETV Program - ETV is a co-sponsor of the U.S. EPA National Environmental Monitoring Conference
Sept. 28	RTP, NC	Air Pollution Control Technology - Stakeholder Advisory Committee Meeting
Oct. 11-13	Atlantic City, NJ	ETV Program - ETV booth exhibit at Brownfields 2000
Oct. 12-13	Vergennes, VT	Advanced Monitoring Systems - Joint meeting of the Air and Water Stakeholder Committees
Oct. 14-18	Anaheim, CA	ETV Program - ETV booth exhibit at WEFTEC 2000

For more details on ETV events, check out our online calendar at http://www.epa.gov/etv/highup.htm

The U.S. EPA National Environmental Monitoring Conference will be held in Boston, MA, September 19-20. The conference will include an opening plenary session, panel sessions, and an exhibitor hall with more than 200 organizations. Technology vendors and suppliers, industry representatives, federal, state, and local agencies, academia, and interested public are expected to attend.

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Web Watch

- ✔ The May 2000 issue of The Monitor from the Advanced Monitoring Systems Pilot has been posted at http://www.epa.gov/etv/07/MonMay00.pdf.
- ✔ A summary of the Advanced Monitoring System Pilot's March 9-10 Air Stakeholder Committee Meeting has been posted at http://www.epa.gov/etv/07/sum-030900.htm.
- ✔ Verification reports for the 13 new verified technologies are available at http://www.epa.gov/etv/library.htm.

Penny Hansen, Director of the ETV Program, received U.S. EPA's Office of Research and Development Statesmanship Award, "For an undying commitment to and implementation of the ideals of customer service in her leadership and management of the Environmental Technology Verification Program."